

Eastern Sierra Fire Restoration and Maintenance Project

Implementation Plan

Introduction

This Implementation Plan is a living document that may be modified to improve the implementation process over time. This Plan was developed to provide a link between the Project Decision Memo and treatments approved during the Implement and Monitor Stage without the need for additional National Environmental Policy Act analysis. The Implementation Plan includes a four stage process and associated checklists, forms, and monitoring guidelines that each individual project will follow to ensure treatments implemented are within the scope of the Decision Memo, that all design criteria are incorporated into treatment design, and there is an established process for including tribes, cooperating agencies, collaborative groups, and the public. Implementation Stages below describe steps in time to design, refine, implement and monitor project treatments as analyzed by the Eastern Sierra Fire Restoration and Maintenance Decision Memo. Prioritization Criteria, Monitoring Plan/Framework and the checklists and forms follow the Implementation Stages section below. Timelines associated with each Stage are approximate and assume adequate staffing to complete tasks.

Cooperating Agency and Collaborative Group Roles

The Forest Service welcomes cooperative partnerships with State, County, local and Federal agencies and Collaborative Groups. This Plan outlines a process for cooperating agencies and collaborative groups to: participate in out-year planning; make treatment recommendations that advance agency/cooperative group missions; review treatment proposals for compliance with Eastern Sierra Fire Restoration and Maintenance project constraints; participate in public engagement activities; and participate in treatment monitoring. The roles and responsibilities of cooperating agencies and collaborative groups during the implementation and monitoring of the Eastern Sierra Fire Restoration and Maintenance project are described in each Stage of the proceeding section.

Tribal Roles

The Forest Service maintains government-to-government relationships with Federally-recognized Indian tribes, and significant relationships with other local tribal groups and organizations. This Plan outlines a process for tribes to: participate in out-year planning; make treatment recommendations that advance tribal interests; incorporate traditional cultural knowledge and practices in treatment proposals; participate in public engagement activities; and participate in implementation, treatment monitoring and treatment feedback as appropriate. The roles and responsibilities of tribes during the implementation and

monitoring of the Eastern Sierra Fire Restoration and Maintenance project are described in each Implementation Stage below.

Public Roles

Continued public engagement is essential to the success of the Eastern Sierra Fire Restoration and Maintenance project implementation. Mechanisms for actively engaging the public are described in the following Stages. Target audience includes, but are not limited to, user groups, nonprofit organizations, utility companies, industry groups, residents of surrounding communities, elected officials, and private citizens. Public input will be accepted during any stage of Project Implementation. However, there are specific timeframes where feedback will be most useful. These timeframes will be developed and advertised as each new treatment area and associated activities are proposed, as described below.

Public input and feedback opportunities and timeframes associated with identifying treatment areas and activities are considered informal in that there are no regulations requiring comment or objection periods for project implementation (36 CFR 218). However, the Forest Service is committed to a transparent process to keep the public engaged and informed as treatment implementation and monitoring evolves. Accordingly, public input and feedback may be shared on Forest Service, Cooperating Agency and/or Collaborative Group websites. This information will also be documented in the Forest Service project record and reports associated with treatment implementation and monitoring.

Implementation Stages

Stage 1: Identify Treatment Opportunities

Timeline: 2 to 3 Months (aim for late Fall/Winter)

Objective: Identify potential treatment areas within project landscapes such as watersheds or Strategic Fire Management Zones. Keep Tribes, cooperating agencies, and the public informed of treatment area development. This stage may include working with internal staff, cooperating agencies and partners to focus limited resources to areas where beneficial vegetation treatments are maximized.

Outcome: Maintenance and restoration potential treatment areas are delineated and advanced to the Feedback (2a) and Prescription and Environmental Clearance (2b) Stages.

Forest Service

- Use the *Prioritization Criteria* to help identify next project landscape;
- Distribute *Project Initiation Form* to USFS Interdisciplinary Team;
- Evaluate large treatment area potential for maximum high severity (patch size and percent area);
- Identify and delineate preliminary maintenance and restoration treatment opportunities within the large treatment area. Consult the Forest Plan to help prioritize these treatment opportunities;
 - Identify fire threat to high valued resources and assets;
 - Complete *Pre-implementation Checklist* to identify management constraints and treatment sideboards. This checklist requires preliminary analysis of specific resources, including:
 - public access, design criteria, habitat potential
- Initiate Tribal Consultation;
- Organize and host annual meeting and initiate consultation as necessary with cooperating agencies, the public, and partner groups to: review and finalize maintenance and restoration treatment opportunities; prioritize maintenance and restoration treatment opportunities within the large area that advance Forest Service and external goals; and review and discuss monitoring results and potential adaptive approaches to future treatment proposals; and

- Review maintenance and restoration treatment opportunities for consistency with law, regulation, and policy and the Eastern Sierra Fire Restoration and Maintenance Project decision memo.

Tribes

- Participate in annual coordination meetings with the Forest Service;
- Assist in identifying priority treatments;
- Assist in identifying opportunities to integrate traditional knowledge and practices in restoration treatments.
- Identify potential funding sources for collaborative restoration projects.

Cooperating Agencies & Collaborative Groups

- Participate in annual coordination meetings with the Forest Service;
- Provide proposals to the Forest Service for consideration in out-year planning;
- Assist Forest Service personnel in prioritizing maintenance and restoration treatment opportunities; and
- Identify potential partners, opportunities to work across boundaries, and potential funding sources.

Public

- Work with the Forest Service and cooperating agencies to identify potential treatment opportunities and priorities;
- Keep informed of Eastern Sierra Fire Restoration and Maintenance Project activities; and
- Participate in public engagement opportunities, as they are advertised.

Stage 2A: Feedback

Timeline: 2 to 3 Months (aim for Winter)

Objective: Give the tribes, the public and cooperating agencies the opportunity to provide detailed, site-specific feedback of restoration and maintenance treatment proposals identified in the Identify Treatment Opportunities Stage.

Outcome: Refined treatment opportunities (activities and boundaries) based on internal Forest Service, tribal, public and cooperating agency input.

Forest Service

- Gather and synthesize feedback, add to project record;
- Assess feasibility factors, such as fireline type and location;
- Identify additional design criteria, if needed, to protect resources and assets;
- Incorporate feedback into project design, as appropriate; and
- Refine treatment opportunities (activities and boundaries).

Tribes

- Provide detailed information and feedback related to treatments, as appropriate.

Cooperating Agencies & Collaborative Groups

- Provide detailed information related to treatments, as appropriate; and
- Consider and address feedback specific to cooperating agency.

Public

- Keep informed of Eastern Sierra Fire Restoration and Maintenance Project activities;
- Participate in public engagement opportunities, as they are advertised; and
- Provide written feedback to project solicitations during established timeframes.

Stage 2B: Prescription and Environmental Clearance

Timeline: 2 to 3 Months (field season)

- May require several field seasons to complete surveys and reporting requirements based on: what resources exist or have potential to exist in the large treatment area and associated survey protocols; the amount of area surveyed to standard in the past; and technical specialist availability to complete field surveys.

Objective: Take refined project from Stage 2A and prepare treatment areas on the ground. This phase includes all field surveys needed for environmental clearance, selecting appropriate design criteria, and incorporating timely site-specific protection measures (e.g., unit card maps include avoidance areas).

Outcome: Treatments finalized and ready for Line Officer approval.

Forest Service

- Use *Resource Checklists* to identify survey needs in time and space;
- Complete field surveys to help delineate treatment locations and confirm treatments can be implemented in accordance with the Eastern Sierra Fire Restoration and Maintenance Project decision memo;
- Finalize treatment unit boundaries, fireline locations, and prescriptions;
- Validate and finalize design criteria;
- Complete unit cards; and
- Communicate final treatments to tribes, cooperators and public.

Tribes

- Assist Forest Service with flagging treatment unit boundaries and completing unit and/or landscape surveys, as appropriate;
- Recommend project design criteria to meet resource needs; and
- Participate in review and preparation of project *Implementation Checklist*, as appropriate.

Cooperating Agencies & Collaborative Groups

- Work with the Forest Service to flag treatment unit boundaries;
- Assist Forest Service with treatment unit and/or landscape surveys, as appropriate;
- Recommend design criteria to maintain or enhance resource;
- Participate in review and preparation of project *Implementation Checklist*, as appropriate; and

- Provide updated treatment information on partnering cooperating agency website, as appropriate.

Public

- Keep informed of Eastern Sierra Fire Restoration and Maintenance Project activities.

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Stage 3: Package Project

Timeline: 1 to 2 Months (winter/early Spring)

Objective: Finalized Line Officer review of treatments prior to implementation. This is the final opportunity for cooperating agencies and Forest Service personnel to ensure consistency with the Eastern Sierra Fire Restoration and Maintenance Project decision memo and to ensure all design criteria have been addressed prior to implementation. The Line Officer will approve the final treatment packages and identify who is responsible for treatment oversight (e.g., Sale Administrator, Contracting Officer Representative, Forest Service burn boss, READ).

Outcome: Treatments approved and ready to implement.

Forest Service

- Review monitoring framework, identify and/or develop focal monitoring components as needed, and incorporate *Implementation Checklist*, as needed;
- Finalize and sign *Implementation Checklist* (resource specialists and line officer);
- Write, review, advertise, and award contracts, as needed;
- Write or revise, review, and approve burn plan, as needed; and
- Notify tribes, cooperating agencies and the public of final treatment units and schedule.
- Develop and approve project Monitoring Plan.

Tribes

- Provide feedback and assist in preparing and implementing treatments and monitoring requirements, as needed;

Cooperating Agencies & Collaborative Groups

- Provide feedback and assist in preparing and implementing treatments and monitoring requirements, as needed;
- Assist in sharing treatment information with the public.

Public

- Keep informed of Eastern Sierra Fire Restoration and Maintenance Project activities.

Stage 4: Implement and Monitor Treatments

Timeline: 2 Months to several years

Objective: Complete unit treatments as approved by line officer in Stage 3. Timing will vary greatly by location and be based on implementation mechanism (e.g. service contract, force account), environmental conditions (e.g., soil moisture, fuel moisture), and resource availability (staff). Monitoring will occur during and after implementation to answer the questions:

- Did we accomplish the treatments as described in Stage 3?
- Were the expected outcomes achieved?
- Are adjustments to future treatments needed?

Monitoring will ensure consistency with Eastern Sierra Fire Restoration and Maintenance project record and provide stakeholders with information to improve future project design.

Outcome: Vegetation treatments and associated monitoring is complete.

Forest Service

- Review unit cards for validity;
- Implement vegetation treatments;
- Track and validate acres treated and associated actions;
- Monitor project implementation and treatment effects;
- Summarize and share monitoring results;
- If monitoring results indicate desired conditions are not achieved and/or activities are resulting in resource impacts, suggest changes to the project and solicit feedback from tribes, cooperating agencies and the public.

Tribes, Cooperating Agencies & Collaborative Groups

- Participate in field reviews;
- Provide feedback on whether treatments met expectations;
- Discuss implementation or monitoring concerns with the Forest Service;
- Provide information to the Forest Service for treatments or monitoring overseen by tribes or cooperating agencies;
- Provide feedback to suggested changes to treatments, if necessary.

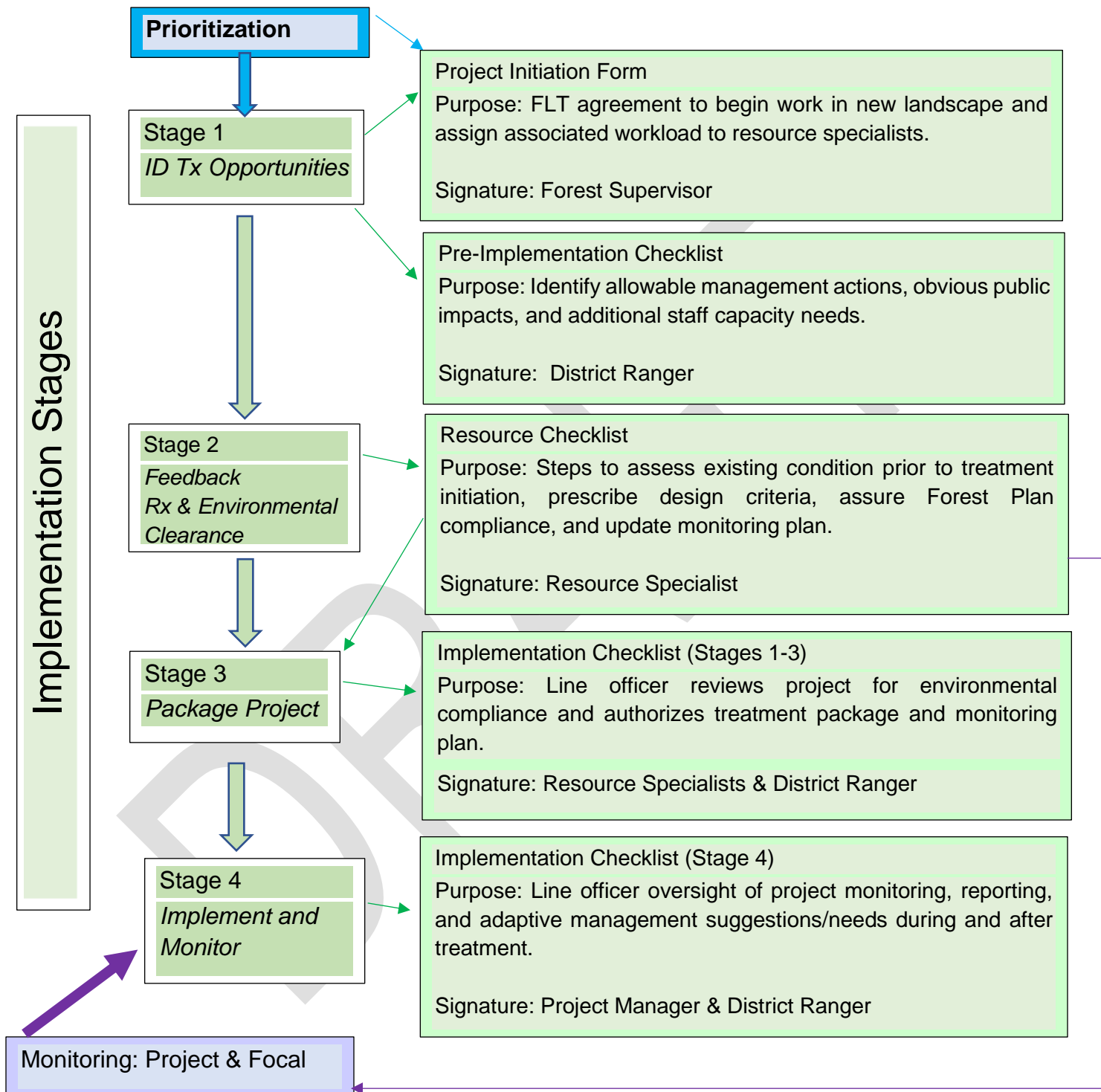
Public

- Review monitoring results;
- Participate in annual Eastern Sierra Fire Restoration and Maintenance Project field trip and review meetings;

- Provide feedback to suggested changes to treatments, if necessary.

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Implementation Forms & Checklists Flow Chart



Project Initiation Form

| | |
|------------------------|--|
| DATE INITIATED: | |
| PROJECT LEADER: | |

NOTE: All requests must be accompanied by a 7.5" topographic map of the project area (page 2) and file path to project GIS data. This includes all ground that may be affected, including equipment staging, control lines, etc.

| | | | | |
|--|-------------|----------------|---------|------|
| PROJECT LANDSCAPE NAME: | | | | |
| DISTRICT: | Mt. Whitney | White Mountain | MAMMOTH | Mono |
| STRATEGIC FIRE MANAGEMENT ZONE(S): | | | | |
| OTHER LAND MANAGEMENT DESIGNATIONS: | | | | |
| GIS DATA: | | | | |

IMPLEMENTATION INTERDISCIPLINARY TEAM: The following individuals are expected to use the Implementation Plan and supporting materials to develop, package, implement and monitor fire restoration and maintenance treatments and associated project activities.

| RESOURCE | SPECIALIST (NAME) | TITLE |
|------------------------|-------------------|-----------------|
| Air | | |
| Botany | | |
| Cultural Resources | | |
| Fire/Fuels | | |
| Lands | | |
| Range | | |
| Recreation | | |
| Soil & Water | | |
| Terrestrial Vegetation | | |
| Timber | | |
| Wildlife | | |
| Line Officer* | | DISTRICT RANGER |

*Line Officer responsible for ensure environmental compliance and tribal, cooperator, collaborative, and public involvement in all stages of this Project

 NAME

Inyo Forest Supervisor

 Date

Figure 1. Project area landscape.

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Pre-Implementation Checklist

Instructions: Complete the form and checklist below prior to fully engaging the Interdisciplinary Implementation Team, cooperating agencies, collaborative groups, and the public.

Form

| | |
|---------------------------|--|
| Project Landscape | |
| Partner(s) | |
| Objective(s) | |
| Location | |
| Management Areas | |
| Data File Location | |

Checklist

For all “yes” answers below, attach documentation or approval information. District Ranger signature confirms all appropriate documentation for necessary pre-implementation items is attached and the Implementation Plan Stages can proceed.

| Yes | No | Checklist Item |
|-----|----|---|
| | | The Project Initiation Form has been signed by the Forest Supervisor and distributed to the Interdisciplinary Implementation Team. |
| | | The project landscape has been identified to have a high need for treatment based on the Prioritization Criteria and is included in the Inyo National Forest 5-year plan. |
| | | All or part of the project landscape is in Inventoried Roadless Area(s). |
| | | All or part of the project landscape encompasses a designated Research Natural Area (RNA). |
| | | Federally listed species and/or critical habitat occurs in the project landscape. |
| | | Treatments have potential to impact public access. |
| | | Forest Plan Standards and Guidelines applicable to the project landscape have been verified and are attached. |

Approved by: RANGER SIGNATURE

Date:

Resource Checklists

Introduction

The checklists below are organized by resource specialty and intended for use during the four Implementation Plan Stages. Checklist items will be completed by the corresponding Implementation Interdisciplinary Team member. It is the District Ranger's responsibility to ensure Resource Specialists complete all checklist items prior to finalizing the Implementation Package and Monitoring Plan. These checklists are living documents that may be edited based on new findings and/or to improve the implementation plan process.

Air Quality

Instructions

Complete steps to secure permits and burning permissions specific to air quality regulations.

Stage 1: Identify Treatment Opportunities

- Identify smoke sensitive areas.

Stage 2a: Prescription and Environmental Clearance

- Complete smoke management plan (e.g. Prescribed Fire Ignition Reporting System).
- Obtain ignition authorization from appropriate air regulation agency.
- Incorporate ignition conditions into burn plan.

Stage 4: Implementation and Monitoring

- Gain daily authorization for burning prior to lighting.
- Coordinate with Land Management Agencies, as needed.
- Provide updates and report results, as needed.

At-Risk and Invasive Plants and Special Habitats

Instructions

The checklist below will be completed by the Forest Botanist or a botanical specialist approved by the Forest Botanist to identify and protect at-risk plant habitat and occurrences and special habitats within and in close proximity to treatment areas. Assess risk of invasive plant introduction and spread associated with treatment activities. Determine at-risk plant and special habitat protection (e.g., flag and avoid) or

enhancement (e.g., burning during dormant season for fire adapted species) measures, applicable design criteria, and invasive plant control or mitigation measures prior to implementation. Provide technical expertise during implementation.

Stage 1: Identify Treatment Opportunities

- Complete pre-field review of at-risk plant occurrences, suitable habitat potential, invasive plant infestations, special habitats (e.g., pumice flats), and recent surveys in the treatment landscape.

Stage 2b: Prescription and Environmental Clearance

- Determine survey area, target species, and survey timing.
- Conduct surveys, document populations, and enter data into NRIS.

Stage 3: Package Project

- Use survey results to prescribe relevant design criteria and/or modify treatment activities (e.g., move proposed fireline to avoid unacceptable impacts to at-risk plant occurrences) as needed.

Stage 4: Implementation and Monitoring

- Treat invasive plants prior to implementation, as needed.
- Provide botanical specialist field support during treatment implementation, as needed.
- Complete project and focal monitoring based on approved monitoring plan.

Cultural Resources

Instructions

Use existing data sets and/or surveys to identify historic properties at risk in the treatment landscape. Identify measures necessary to protect or avoid adverse effects or to resolve adverse effects on historic properties from proposed treatments. Complete National Historic Preservation Act (NHPA) Section 106 compliance. Implement prescribed cultural resource monitoring, protection and avoidance measures and conduct any prescribed post-treatment survey.

Stage 1: Identify Treatment Opportunities

- Initiate consultation with tribes, SHPO and interested parties.

Stage 2a: Feedback

- Conduct pre-field cultural resource literature review.

Stage 2b: Prescription and Environmental Clearance

- Assess field survey needs to identify historic properties at risk. Consult with SHPO on non-intensive or sample survey methodologies if necessary.
- Complete archaeological field surveys.
- Identify cultural resource avoidance, protection, monitoring and/or post-treatment survey needs in coordination with the interdisciplinary team and line officer.
- Prepare NHPA Section 106 compliance report and complete consultation.

Stage 3: Package Project

- Incorporate prescriptions for historic property avoidance, protection, monitoring, and post-treatment survey into unit cards.

Stage 4: Implementation and Monitoring

- Provide cultural resource specialist field support during implementation as needed.
- Complete project, focal monitoring and post-treatment surveys based on approved monitoring plan.

Fire/Fuels

Instructions

Work in a transparent, interdisciplinary manner to assess forest conditions and develop treatment prescriptions to restore and maintain fire regimes in target vegetation types.

Stage 1: Identify Treatment Opportunities

- Map fire maintenance and restoration opportunities in priority landscape.

Stage 2b: Prescription and Environmental Clearance

- Assess fuel loads for potential treatment areas.
- Use fuel loading, ladder fuels, and crown connectivity to identify appropriate treatment tools (broadcast burn alone, hand thin and pile, targeted mowing) for each unit.
- Delineate control line location and type for each unit.

Stage 3: Package Project

- Draft unit cards and review unit prescriptions with interdisciplinary team.
- Finalize unit cards with interdisciplinary input.
- Draft and/or edit burn plan.
- Identify operations staffing needs.
- Finalize burn plan.
- Prepare and submit smoke plan.
- Obtain burn permit.
- Write, advertise and award contracts, as needed.
- Write and finalize agreements, as needed.

Stage 4: Implementation and Monitoring

- Notify internal staff, the public and cooperating agencies of planned burning operations.
- Rehabilitate control lines.
- Complete project and focal monitoring based on approved monitoring plan.

Land Survey

Instructions

Prior to initiating vegetation treatments, land boundaries will be identified and marked for protection.

Stage 1: Identify Treatment Opportunities

- Consult Regional, Zone or Forest Land Surveyor for Public Land Survey System (PLSS) monument status.
- Initiate cadastral surveys, as needed.

Stage 2b: Prescription and Environmental Clearance

- PLSS has been completed, boundaries are marked, and monument protection measures are in place.
- If units are within 300 feet of wilderness or Research Natural Areas, locate boundaries.

Range

Instructions

Assess and mitigate treatment impacts to range infrastructure and allotment conditions. Keep range permittees informed of potential treatment impacts to allotment use.

Stage 1: Identify Treatment Opportunities

- Two years prior to implementing treatments, inform Rangeland Management Specialist of potential treatment areas.
- Identify range allotments and pastures that overlap proposed treatment areas.

Stage 2a: Feedback

- Identify and map all range infrastructure within treatment areas (i.e. water troughs, fence, pipelines, corrals, cabins, etc.).

Stage 2b: Prescription and Environmental Clearance

- Prescribe relevant design criteria to protect infrastructure.

Stage 3: Package Project

- Coordinate treatment schedule with range allotment permittee.

Stage 4: Implementation and Monitoring

- Monitor post-treatment forage recovery.
- Complete project and focal monitoring based on approved monitoring plan.

Recreation**Instructions**

The recreation specialist will work with the team to inventory the recreation attributes that may be affected by treatments. The type of treatment and the location can affect recreation activities and the quality of the recreation experience in the near term and over the long term. Evaluate how the treatment will affect the recreation facilities and settings in the area. Use the design criteria to ensure that the recreation opportunities are managed appropriately for the period of treatment implementation and for the long-term. Design implementation to minimize impacts to recreation users to the extent feasible, including having good communication with partners and the public about the impacts of the activities.

Stage 1: Identify Treatment Opportunities

- Engage recreation staff two years prior to implementation in locations where the concentration of recreation assets could result in major disruption of public access and/or commercial recreation.

Stage 2a: Feedback

- Identify recreation assets that may be affected by proposed treatments.

Stage 2b: Prescription and Environmental Clearance

- Select necessary design criteria and mitigation measures prior to implementation.

Stage 3: Package Project

Notify visitors, concessionaires, recreation special uses permittees, and other partners of potential impacts to recreation prior to project implementation.

Stage 4: Implementation and Monitoring

Conduct walk-through with the recreation specialist to confirm that post-treatment mitigations and repairs have been completed to specifications.

Silviculture

Instructions

Evaluate stand conditions to develop prescriptions that are compatible with silvicultural goals, objectives and standards, including canopy mortality thresholds and long-term forest regeneration and persistence.

Stage 1: Identify Treatment Opportunities

- Work with fire to identify, map and prioritize fire maintenance and restoration treatment areas to achieve desired conditions. Factors to consider may include:
 - Fire History
 - Activity History (FACTS)
 - Proximity to communities
 - Location within/outside of suitable timber base
 - Accessibility
 - Presence of aspen
- Verify potential treatment areas do not interfere with existing, planned timber sales or other vegetation management contracts.

Stage 2a: Feedback

- Work with Forest leadership as needed to present the forest health and silviculture to the collaboration and public.
- Determine forest health conditions for potential threats to the treatment unit including pests and pathogens.

Stage 2b: Prescription and Environmental Clearance

- Develop stand exam protocol, or other methods to assess current conditions, and sampling scheme for project area, as needed.
- Collect and process data to inform silvicultural prescription and burn plan development.
- Use survey results to prescribe relevant design criteria and/or modify treatment activities, as needed.
- Develop silviculture prescription which will determine a range of desired conditions to be achieved through vegetation management activities.
 - Work with fire staff to ensure prescription is viable based on field conditions.
 - Determine if desired conditions can be achieved using fire or if hand or mechanical treatments are required.

Stage 4: Implementation and Monitoring

- Complete project and focal monitoring based on approved monitoring plan.
 - Large (> 5 acre) high severity patches should be assessed for adequate stocking.

Soil and Water Quality**Instructions**

This implementation checklist is tied to Soil and Watershed design criteria. The checklist assumes that the soil/watershed specialist will recommend site specific design features based on specific conditions of the treatment units and select design criteria for each unit as appropriate.

Stage 1: Identify Treatment Opportunities

- Perform Cumulative Watershed Effects (CWE) analysis for proposed treatment areas to ensure cumulative effects is below the Threshold of Concern (TOC).

Stage 2a: Feedback

- Map water bodies, water body buffers and sensitive soils (if needed) within the treatment area. Indicate past prescribed and wildfires (20 years) on map products.
- Identify sensitive soil types (i.e. very high or severe erosion hazard rating) slopes greater than 40 percent, and mass wasting prone areas.
- Evaluate how many acres within a HUC 6 (12) are proposed for treatments on a yearly basis.

- Evaluate past wildfires and/or prescribed fires within the HUC 6(12) proposed for treatment.

Stage 2b: Prescription and Environmental Clearance

- Determine survey needs and conduct field investigations, as needed.
- All fens, wetlands, and water body buffers delineated, identified and possibly flagged.
- If burning is prescribed for Riparian Conservation Areas (RCAs) with shrub dominated uplands, consult with a hydrologist/watershed specialist to identify specific design criteria for prescribed burning within these areas.
- Assess control line type and location based on water body buffer zone (Riparian Conservation Area), and the potential for impacts to the hydrology of groundwater dependent ecosystems.
 - Work with Fire Staff to make adjustments based on anticipated effects to watershed resources, as needed.
- If broadcast prescribed fire is proposed for or is likely to back into Riparian Conservation Areas, refine boundaries and prescribe design criteria to protect stream channel stability, riparian vegetation and hydrology to groundwater dependent ecosystems.
- Based on treatment areas, determine which, if any, timber waiver category the proposed action falls under.

Stage 3: Package Project

- Use evaluation and survey findings to modify treatment prescription and/or boundaries and prescribe design criteria, as needed.
- After the correct timber waiver has been identified, apply for timber waiver.

Stage 4: Implementation and Monitoring

- Notify Regional Water Quality Control Board prior to implementing proposed treatments.
- During and after implementation, monitor to ensure compliance with the timber waiver as needed.
- Monitor to ensure appropriate design criteria are implemented. Complete project and focal monitoring based on approved monitoring plan.
- Assess post-treatment burn severity.

Terrestrial Vegetation

Instructions

Identify opportunities to maintain or promote old forests, reduce risk of aspen loss, and protect/enhance special habitats and unique vegetation types.

Stage 1: Identify Treatment Opportunities

- Create map displaying old forest habitat, aspen stand assessment, special habitats, high-elevation white pines, and oaks overlaid with fire history over the past 30 years to evaluate whether vegetation or habitat-specific protection or enhancement measures or other design criteria are needed.
- Review aspen type and loss risk in aspen assessment geodatabase to identify appropriate treatments.

Stage 2b: Prescription and Environmental Clearance

- Assess old forest and/or exceptionally large trees with deep duff at the base for delayed mortality potential and prescribe design criteria (raking around large trees), as appropriate.
- Evaluate potential fire impacts to special habitats to refine treatment boundaries and/or prescribe design criteria, as needed.
- Site-specific surveys:
 - Montane/subalpine transition zone – If prescribed fire is proposed for stands with $\geq 10\%$ canopy cover of high-elevation white pines (limber, foxtail and whitebark pine species) in the transition zone, work with implementation staff to develop ecologically appropriate treatment methods and protection measures in these stands.
 - Southern Inyo NF – Delineate mature (≥ 12 inches dbh) oaks and use this information to improve treatment prescription, as needed.

Stage 4: Implementation and Monitoring

- Complete project and focal monitoring based on approved monitoring plan.

Wildlife (Terrestrial & Aquatic)

Instructions

The checklist below should be completed by a Forest Biologist to identify and protect at-risk species and associated habitat within and in close proximity to treatment areas. Assess risk of treatment activity to at-risk species and identify opportunities to achieve desired conditions. Determine at-risk species protection (e.g., flag and avoid raptor nest thermal areas) and or enhancement (e.g., meadow burning for pollinators) measures, applicable design criteria, and or mitigation measures prior to implementation. Provide technical expertise during implementation

Stage 1: Identify Treatment Opportunities

- Identify and prioritize pre-field review of units for at-risk species and desired conditions.

- Complete pre-field review of at-risk species occurrences and associated habitats.

Stage 2a: Feedback

- Determine target species, survey area, and timing needs based on pre-field review of treatment landscape.

Stage 2b: Prescription and Environmental Clearance

- Conduct surveys, document results and species effects determinations.
- Develop prescriptions for at-risk species and desired condition.
- Use survey results to refine treatment activities and provide design criteria to mitigate negative impacts and/or create beneficial impacts for target species.
- Incorporate prescriptions and mitigation areas into unit cards.

Stage 3: Package Project

- Identify focal monitoring needs based on survey results and where desired conditions are expected to be achieved as well as where beneficial effects are planned.

Stage 4: Implementation and Monitoring

- Monitor treatment implementation impacts to at-risk species based on approved monitoring plan.

Line Officer Implementation Checklist

Instructions: Complete checklist below while the Interdisciplinary Implementation Team, cooperating agencies, collaborative groups, and public work through Implementation Stages 1 through 4 for the identified landscape.

Project Landscape:

Stages 1 through 3: Treatment design, resource protection, unit package and focal monitoring approval.

| Resource | Field surveys are complete and inform unit prescriptions; design criteria are known. | Resource specific Project Design Criteria are captured on unit cards; the project complies with Forest Plan Standards and Guidelines. | Focal Monitoring is recommended and added to project Monitoring Plan. | Resource Checklist is complete and has been reviewed with District Ranger. | Signature/Date* |
|------------------------|--|---|---|--|------------------------|
| Air | | | | | |
| Botany | | | | | |
| Cultural Resources | | | | | |
| Fire/Fuels | | | | | |
| Lands | | | | | |
| Range | | | | | |
| Recreation | | | | | |
| Soil & Water | | | | | |
| Terrestrial Vegetation | | | | | |
| Timber | | | | | |
| Wildlife | | | | | |

**Signatures acknowledge participation in the design, review, and/or preparation of this project.*

Stages 1-3 are complete. Resource concerns have been mitigated through project design or protection measures to be implemented during treatment are known. Treatments are within the scope of the project effects analyzed. The project is approved to move forward.

Approved by: *RANGER SIGNATURE*

Date:

Stage 4: Treatment Implementation and Monitoring**Project Landscape:****Unit(s):**

| Item | Signature/Date | |
|--|----------------|-----------------|
| | Project Leader | District Ranger |
| Project Monitoring Plan is finalized and approved. | | |
| If signed more than three years ago, the Line Officer Implementation Checklist has been reviewed by the interdisciplinary team to confirm that design criteria and protection measures on treatment unit cards remain valid. | | |
| Internal USFS staff is aware of project implementation progress to ensure prescribed protection, monitoring and coordination measures to achieve desired conditions are implemented as prescribed on unit cards (e.g., during burning operations, first season after treatment, advance notification to permittees and recreating public). | | |
| Project Treatment and Focal Monitoring are complete. | | |
| Monitoring results are summarized. | | |
| Adaptive management recommendations are developed and based on project monitoring outcomes. | | |

Monitoring Framework

Introduction

For each Project Landscape for which the Implementation Stages and associated forms and checklists are applied, a project specific monitoring plan will be developed, finalized, and approved by the District Ranger identified in the Project Initiation Form.

Project Monitoring will assess high severity patch size and distribution and fire regime restoration status. This monitoring is described under the Project Monitoring section below and will be applied to all project landscapes. Though this monitoring is intended for the project landscape scale, it may be expanded to other extents as needed.

Focal Monitoring will be used to assess the efficacy of design criteria, specific treatments, and other resource concerns, as needed. Though some focal monitoring is described below, this list is not comprehensive and will be developed over time. Focal monitoring will be customized for each project landscape based on existing conditions at the time of implementation, treatment methods, and resource presence within each unique project landscape.

Project Monitoring

Project monitoring is specific to the Eastern Sierra Fire Restoration and Maintenance Project. The monitoring questions and methods described below will be used to assess whether or not treatments are moving target vegetation toward desired conditions and to make informed recommendations to adapt methods for future treatment.

What is the high severity overstory patch size distribution?

Methods: Compare pre-treatment overstory to post-treatment overstory within 5 years of treatment implementation and every 5 years until all treatments are complete in the project landscape. Identify size of each high severity patch, classify each patch using Appendix A in the Decision Memo, determine the portion of target vegetation by high severity patch size class within the project landscape.

Tools: RAVG (GTAC), F3 (RSL), hand digitizing pre- and post-treatment overstory openings

Are stand conditions resilient to wildfire and other stressors?

Methods: Compare pre- and post-treatment forest structure (overstory and understory) within 5 years of treatment implementation, including additional treatment areas as needed until all treatments are complete in the project landscape. Forest structure desired conditions described in the Inyo Forest Plan and relevant Natural Range of Variation assessments will be used as benchmarks for comparison with pre- and post-treatment structural conditions.

Does overstory and understory support a diversity of wildlife habitats?

Methods: Use the stand structure monitoring described above to evaluate (1) large tree, snag, and log densities for old/mature-forest dependent species, and (2) understory cover and diversity (herbs, shrubs) for species that rely on a diverse understory.

Are invasive plants at or below pre-treatment extent and density?

Methods: This monitoring will be achieved through Forest Plan Implementation Monitoring for Focal Species.

Are control lines and/or prescribed fire operations facilitating unauthorized recreation/use?

Methods: All control lines constructed to limit broadcast burn extent will be evaluated for signs of foot traffic (hiking), bike tracks, motorized vehicle tracks, and horse/stock use within 1 month of construction and continue each month for up to 6 months following rehabilitation. Where unauthorized use is observed, control lines will be mapped, rehabilitated, and monitored monthly for up to 6 months.

Focal Monitoring

Focal monitoring will be applied to project landscapes where specific treatments are applied and/or where a need exists based on existing resources or conditions. District Ranger identified in the Project Initiation Form will review and approve proposed focal monitoring for each project landscape. Focal monitoring questions and methods described below are not comprehensive and should be expanded over time as information gaps and/or public concern warrant.

Does targeted mowing change fire behavior?

Methods: Compare mowed (treatment) and un-mowed (control) portions of the same unit.

Before mowing: Measure height to live crown and understory shrub height from tree bole to within 3 feet of the canopy dripline. Take 10 measurements per tree across a 1 acre treatment/control area.

After mowing: For mowed plots, measure understory vegetation height from tree bole to within 3 feet of the canopy dripline. Take 10 measurements per tree across a 1 acre treatment and control plot.

During broadcast burning: Observe and record flame lengths within 1 acre treatment and control plots. Observation methods can range from ocular estimations to heat protected cameras.

Immediately after broadcast burning: Measure bole char and canopy scorch height within 1 acre treatment and control plots.

Season after burning: Tally all trees by diameter class that died since broadcast burning.

Replicas: A minimum of 5 paired control and treatment plots are recommended.

Does targeted mowing introduce and/or spread cheatgrass or other invasive plant species (e.g. Russian thistle)?

Methods: Survey mowing treatment area for noxious weeds prior to implementation, then in the first growing season at a minimum to assess introduction and/or spread.

Are native conifers naturally regenerating in high severity patches greater than 5 acres?

Methods: Measure conifer regeneration in high severity burned and unburned stands within 5 years of treatment implementation, including additional areas as needed until all treatments are complete in the project landscape. Tally conifer regeneration, by species, in 0.12 acre plots located within high severity burned patches (greater than 5 acres) and other burned (low and moderate severity) and unburned patches.

Sampling intensity: For every 10 acres located within a high severity patch, establish one 0.12 acre plot and an equal number of low-moderate or unburned plots for comparison. For example, a 50 acre high severity patch will require 10 monitoring plots (5 in high severity, 5 in low-moderate severity or unburned).

Does raking of duff around legacy trees decrease fire-related mortality?

Methods: Compare raked (treated) and unraked (untreated) exceptionally large trees in the same unit. In units where large trees are rare or very sparse, few to no unraked trees may be available for comparison.

Before burning: Measure duff at the base of exceptionally large trees both prior to and following raking treatment.

Season after burning: Tally the number of live and dead exceptionally large trees and record whether trees were treated or untreated.

Is aspen regenerating (resprouting) following treatment?

Methods: Establish photo monitoring points using guidelines described in:

Shepperd, W., P. Rogers, D. Burton, D. Bartos. 2006 Ecology, biodiversity, management, and restoration of Aspen in the Sierra Nevada. RMRS-GTR-178. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 122 pp.